* 1. **Transformations** No... not Transformers!

[](http://ca.bing.com/images/search?q=transformers+image&view=detail&id=A691E6C8861206A92A9783B09F63B228E306460F&first=0&FORM=IDFRIR)

Name:\_\_\_\_\_\_\_\_\_\_\_\_ Date:\_\_\_\_\_\_\_\_\_\_\_\_

**Lesson Focus: Mathletes will be able to use a translation, a reflection and rotation.**

**Definitions:**

**Transformation:**  Moving a shape

**Translation:**  Sliding a shape along straight line

**Reflection:**  A mirror image of a shape

**Rotation:** Turned about a point which is called the center of rotation

Did you know….

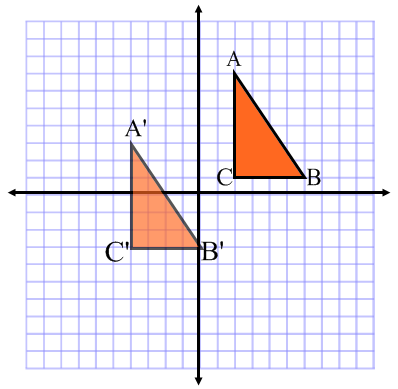
* The new figure’s vertices are indicated using “prime” notation (for example, A is translated to A’)

Let me show you what I mean…

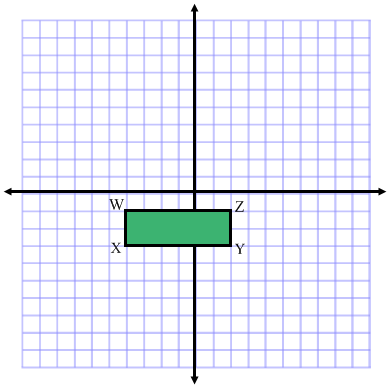


Translation examples:

Ex.1 Mrs. Kidd is living in a hotel at Sylan lake (can’t wait to live in my own home!) Outside her window she sees people zooming around on their sail boats. Write the translation of Sail Boat ABC as it sails on the lake.

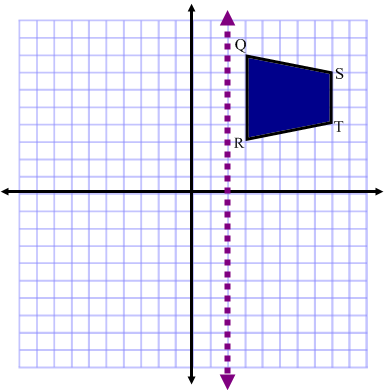


Ex. 2 Below is a plan for Spenser’s dream garden..but he has decided he wants to have the landscapers move is 3 units to the right and 4 unit up. Draw the new garden location and write the new coordinates below.

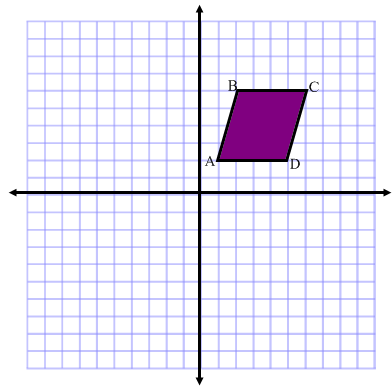


Reflection Examples:

Ex 1 Below is a transformer head admiring himself in the mirror. Draw the reflection of the beautiful machine head and state the new coordinates

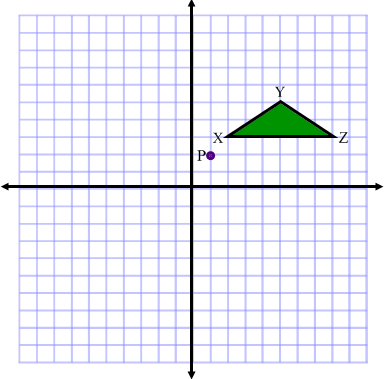


Ex. 2 Yet another robot wants to admire herself. This time draw the reflection across the x axis….do you remember which axis is X? remember to write the coordinate of the reflection☺

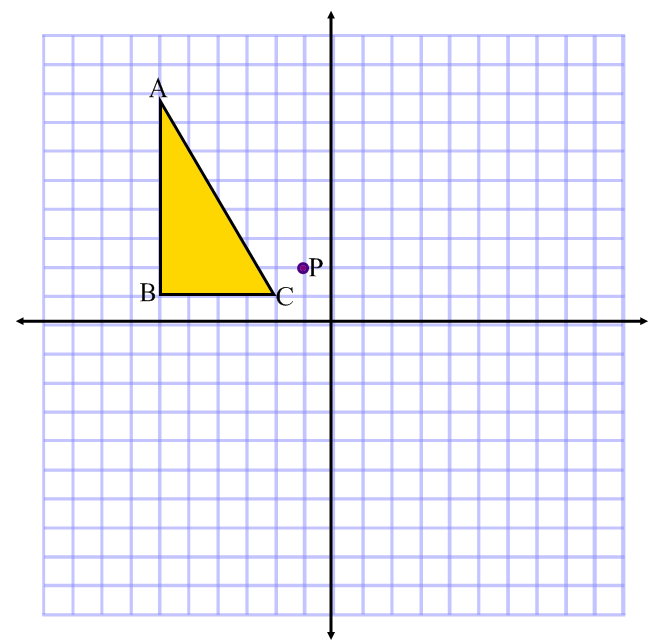


Rotation Examples - Rotations are tricky and Skateboarders are pro at rotations

Ex. 1 Here is a triangle design at one end of Alex’s skateboard (just pretend it’s there). Draw the triangle as Alex undergoes a 90⁰ turn clockwise around point P.



Ex. 2 Now it’s Kidd’s turn to turn. Mrs. Kidd also owns a skateboard (though she’s not so pro anymore). Draw the rotation of the triangle as it rotates 180⁰ around point P.



EXTREME CHALLENGE!!!1

Find the center of rotation (where is the point it rotated around?) AND determine the angle of rotation (how much did it rotate?) Think hard…you can do it!!!

